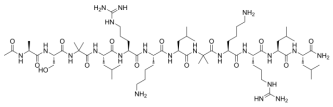
COG1410

Cat. No.:	HY-P2136
CAS No.:	878009-24-6
Molecular Formula:	$C_{64}H_{121}N_{21}O_{14}$
Molecular Weight:	1408.78
Sequence Shortening:	Ac-AS-{Aib}-LRKL-{Aib}-KRLL-NH2
Target:	Apoptosis
Pathway:	Apoptosis
Storage:	Sealed storage, away from moisture and light, under nitrogen 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, under nitrogen)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (70.98 mM; Need ultrasonic)
H_2O : 25 mg/mL (17.75 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	0.7098 mL	3.5492 mL	7.0983 mL
	5 mM	0.1420 mL	0.7098 mL	1.4197 mL
	10 mM	0.0710 mL	0.3549 mL	0.7098 mL

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

In Vivo

1. Add each solvent one by one: PBS
   Solubility: 14.29 mg/mL (10.14 mM); Clear solution; Need ultrasonic and warming
2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (1.77 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (1.77 mM); Clear solution
4. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (1.77 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

COG1410 is an apolipoprotein E-derived peptide and an apoptosis inhibitor. COG1410 exerts neuroprotective and antiinflammatory effects in a murine model of traumatic brain injury (TBI). COG1410 can be used for the research of

	neurological disease[1][2].
In Vitro	COG1410 (1-25 μM; 48 h) decreases the production and release of NO and TNFα in BV2 microglia cells[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	COG1410 (0.3-0.6 mg/kg; a single i.v.) exhibits significant improvement on a short term test of vestibulomotor function and on a long term test of spatial learning and memory in mice[1]. ?COG1410 (0.8 mg/kg; a single i.v.) improves vestibulomotor function, decreases poststroke locomotor asymmetry, and decreases infarct volume of the ipsilateral hemisphere in rats[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Male C57Bl/6J mice (12-16 weeks) with TBI[1]
Dosage:	0.3, 0.6 mg/kg
Administration:	A single i.v. by tail vein
Result:	Improved motor function on days 1-5 postinjury. Significantly improved cognitive impairment. Reduced the number of injured hippocampal neurons. Suppressed the microglial activation.

REFERENCES

[1]. Laskowitz DT, et, al. COG1410, a novel apolipoprotein E-based peptide, improves functional recovery in a murine model of traumatic brain injury. J Neurotrauma. 2007 Jul;24(7):1093-107.

[2]. Tukhovskaya EA, et, al. COG1410, a novel apolipoprotein-E mimetic, improves functional and morphological recovery in a rat model of focal brain ischemia. J Neurosci Res. 2009 Feb 15;87(3):677-82.

[3]. Kuai L, et, al. Apolipoprotein E-Mimetic Peptide COG1410 Enhances Retinal Ganglion Cell Survival by Attenuating Inflammation and Apoptosis Following TONI. Front Neurosci. 2019 Sep 13;13:980.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA