RO27-3225 TFA

Cat. No.: HY-P2242A

Molecular Formula: $C_{41}H_{53}F_3N_{12}O_8$

Molecular Weight: 898.93

Sequence: Oxobutyl-His-Phe-Arg-Trp-{Sar}-NH2

Sequence Shortening: Oxobutyl-HFRW-{Sar}-NH2

Oxobutyl-HFRW-{Sar}-NH_2 (TFA salt)

Target: Melanocortin 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

DMSO : 100 mg/mL (111.24 mM; Need ultrasonic)

H_2O : 100 mg/mL (111.24 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.1124 mL	5.5622 mL	11.1243 mL
	5 mM	0.2225 mL	1.1124 mL	2.2249 mL
	10 mM	0.1112 mL	0.5562 mL	1.1124 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 (111.24 mM); Clear solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (2.78 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (2.78 mM); Clear solution
4. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (2.78 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

RO27-3225 TFA is potent and selective melanocortin 4 receptor (MC4R) agonist with an EC_{50} of 1 nM and 8 nM for MC4R and MC1R, respectively. RO27-3225 TFA shows ~30-fold selectivity for MC4R over MC3R. RO27-3225 TFA has neuroprotective and

	anti-inflammatory effects[1][2][3].
IC_{50} & Target	MC4R
In Vivo	RO27-3225 (0.012-0.048 mg/kg; intravenous injection; Wistar rats) treatment reverses haemorrhagic shock, reduces multiple organ damage and improves survival. RO27-3225 could have a protective role against multiple organ failure following circulatory shock[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Wistar rats of both sexes (270-300 g) with haemorrhagic shock[2]
Dosage:	0.012 mg/kg, 0.024 mg/kg, 0.048 mg/kg
Administration:	Intravenous injection
Result:	Reversed haemorrhagic shock, reduced multiple organ damage and improved survival.

REFERENCES

[1]. Giuliani D, et al. Selective melanocortin MC4 receptor agonists reverse haemorrhagic shock and prevent multiple organ damage. Br J Pharmacol. 2007 Mar;150(5):595-603.

[2]. Zhang Y, et al. Effects of RO27-3225 on neurogenesis, PDGFRβ+ cells and neuroinflammation after cerebral infarction. Int Immunopharmacol. 2020 Feb 11;81:106281.

[3]. Benoit SC, et al. A novel selective melanocortin-4 receptor agonist reduces food intake in rats and mice without producing aversive consequences. J Neurosci. 2000 May 1;20(9):3442-8.

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