

Nociceptin (1-13), amide TFA

Cat. No.:	HY-P1317A		
Molecular Formula:	C ₆₃ H ₁₀₁ F ₃ N ₂₂ O ₁₇		
Molecular Weight:	1495.61		
Sequence:	Phe-Gly-Gly-Phe-Thr-Gly-Ala-Arg-Lys-Ser-Ala-Arg-Lys-NH ₂	FGGFTGARKSARK-NH ₂ (TFA salt)	
Sequence Shortening:	FGGFTGARKSARK-NH ₂		
Target:	Opioid Receptor		
Pathway:	GPCR/G Protein; 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

DMSO : ≥ 100 mg/mL (66.86 mM)
 * "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	0.6686 mL	3.3431 mL	6.6862 mL
	5 mM	0.1337 mL	0.6686 mL	1.3372 mL
	10 mM	0.0669 mL	0.3343 mL	0.6686 mL

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

In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2.5 mg/mL (1.67 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.5 mg/mL (1.67 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.5 mg/mL (1.67 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Nociceptin (1-13), amide TFA is a potent ORL1 receptor (opioid receptor-like 1 receptor, OP4) agonist with a pEC₅₀ of 7.9 for mouse vas deferens and a K_i of 0.75 nM for binding to rat forebrain membranes^{[1][2]}.

IC₅₀ & Target

NOP Receptor/ORL1

REFERENCES

[1]. Varani K, et al. Nociceptin receptor binding in mouse forebrain membranes: thermodynamic characteristics and structure activity relationships. Br J Pharmacol. 1998 Dec;125(7):1485-90.

[2]. Calo' G, et al. Pharmacology of nociceptin and its receptor: a novel therapeutic target. Br J Pharmacol. 2000 Apr;129(7):1261-83.

Caution: Product has not been fully validated for medical applications. For research use only.

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