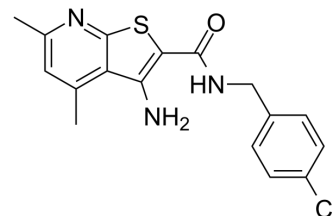


VU10010

Cat. No.:	HY-14563		
CAS No.:	633283-39-3		
Molecular Formula:	C ₁₇ H ₁₆ ClN ₃ OS		
Molecular Weight:	345.85		
Target:	mAChR		
Pathway:	GPCR/G Protein; Neuronal Signaling		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 125 mg/mL (361.43 mM; Need ultrasonic)

Concentration	Solvent	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	2.8914 mL	14.4571 mL	28.9143 mL
	5 mM	0.5783 mL	2.8914 mL	5.7829 mL
	10 mM	0.2891 mL	1.4457 mL	2.8914 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: ≥ 2.08 mg/mL (6.01 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.08 mg/mL (6.01 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

VU10010 is a potent, highly selective and allosteric M₄ mAChR potentiator with an EC₅₀ of 400 nM. VU10010 binds to an allosteric site on M₄ mAChR and increases affinity for acetylcholine and coupling to G proteins. VU10010 increases carbachol-induced depression of transmission at excitatory but not inhibitory synapses in the hippocampus^[1].

In Vitro

VU10010 potentiates the M₄ response to acetylcholine 47-fold while having no activity at other mAChR subtypes (rM₁, rM₂, rM₃ or rM₅). VU10010 causes an increase in affinity for ACh and M₄-mediated [³⁵S]GTPγS binding^[1]. VU10010 (10 μM) has no agonist, antagonist or allosteric potentiator activity at P2Y₁R or mGluR5^[1]. The EC₅₀ values are 33 and 0.7 nM for ACh in the absence and presence of VU10010, respectively^[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Jana K Shirey, et al. An allosteric potentiator of M4 mAChR modulates hippocampal synaptic transmission. Nat Chem Biol. 2008 Jan;4(1):42-50.

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

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