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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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Xanomeline

Cat. No.: HY-105182

CAS No.: 131986-45-3

Molecular Formula: $C_{14}H_{23}N_3OS$

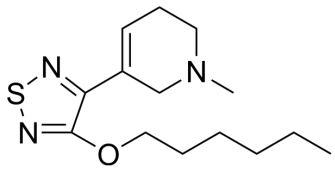
Molecular Weight: 281.42

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 : 33.33 mg/mL (118.44 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	3.5534 mL	17.7670 mL	35.5341 mL
5 mM	0.7107 mL	3.5534 mL	7.1068 mL
10 mM	0.3553 mL	1.7767 mL	3.5534 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (8.88 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: 2.5 mg/mL (8.88 mM); Suspended solution; Need ultrasonic
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (8.88 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Xanomeline, as an effective and selective muscarinic type 1 and type 4 (M1/M4) receptor agonist, increases neuronal excitability. Xanomeline can be used for the research of neurological disorders, such as schizophrenia[1][2].

IC_{50} & Target

mAChR1 mAChR4

In Vitro

Xanomeline (0.1~10 μM; CNS4U) shows an overall increase in the mean firing rate. Xanomeline shows the M1 receptor is functional in hiPSC derived neurons. Xanomeline (⊠1 μM) has a prolonged engagement with the receptor and produces a

	persistent receptor activation leading to a sustained suppression of the M-current[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Xanomeline (0.5~3 mg/kg; s.c.; 1~3 hours) induces salivation and vomiting in some monkeys[3]. Xanomeline shows functional dopamine antagonism and an antipsychotic-like profile. Xanomeline inhibits D-amphetamine- and ( )-apomorphine-induced behavior and do not cause extrapyramidal side effects[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Male Cebus apella monkeys
Dosage:	0.5~3 mg/kg
Administration:	S.c.; 1~3 hours
Result:	Induced salivation and vomiting in some monkeys.

CUSTOMER VALIDATION

- Int J Mol Sci. 2023 Apr 16, 24(8), 7356.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Kreir M, et al. Role of Kv7.2/Kv7.3 and M1 muscarinic receptors in the regulation of neuronal excitability in hiPSC-derived neurons. Eur J Pharmacol. 2019;858:172474

[2]. Shekhar A, et al. Selective muscarinic receptor agonist xanomeline as a novel treatment approach for schizophrenia. Am J Psychiatry. 2008;165(8):1033-1039.

[3]. Andersen MB, et al. The muscarinic M1/M4 receptor agonist xanomeline exhibits antipsychotic-like activity in Cebus apella monkeys. Neuropsychopharmacology. 2003;28(6):1168-1175.

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