McN-A-343

Cat. No.: HY-107648

CAS No.: 55-45-8

Molecular Formula: $C_{14}H_{18}Cl_2N_2O_2$

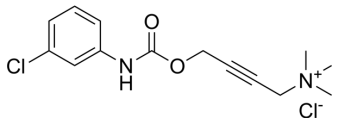
Molecular Weight: 317.21

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

H_2O : 100 mg/mL (315.25 mM; Need ultrasonic)
DMSO : 100 mg/mL (315.25 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.1525 mL	15.7624 mL	31.5249 mL
	5 mM	0.6305 mL	3.1525 mL	6.3050 mL
	10 mM	0.3152 mL	1.5762 mL	3.1525 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 (7.88 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (7.88 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (7.88 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

McN-A-343 is a selective M1 muscarinic agonist that stimulates muscarinic transmission in sympathetic ganglia. McN-A-343 reduces inflammation and oxidative stress in an experimental model of ulcerative colitis[1][2]. McN-A-343 is a click chemistry reagent, it contains an Alkyne group and can undergo copper-catalyzed azide-alkyne cycloaddition (CuAAc) with molecules containing Azide groups.

IC_{50} & Target

mAChR1

CUSTOMER VALIDATION

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

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REFERENCES

[1]. Koss MC, et al. Analysis of miosis produced by McN-A-343 in anesthetized cats. J Ocul Pharmacol Ther. 1995;11(3):389-399.

[2]. Magalhães DA, Batista JA, Sousa SG, et al. McN-A-343, a muscarinic agonist, reduces inflammation and oxidative stress in an experimental model of ulcerative colitis. Life Sci. 2021;272:119194.

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