W-84 dibromide

Cat. No.: HY-100979

CAS No.: 21093-51-6

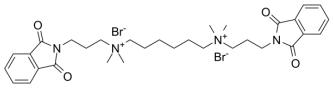
Molecular Formula: $C_{32}H_{44}Br_2N_4O_4$

Molecular Weight: 708.52

Target: mAChR

Pathway: GPCR/G Protein; Neuronal Signaling

Storage: 4°C, sealed storage, away from moisture
* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 6.25 mg/mL (8.82 mM; ultrasonic and warming and heat to 60°C)
H_2O : 3.03 mg/mL (4.28 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	1.4114 mL	7.0570 mL	14.1139 mL
5 mM	0.2823 mL	1.4114 mL	2.8228 mL
10 mM	---	---	---

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

BIOLOGICAL ACTIVITY

Description

W-84 (dibromide) is a potent allosteric modulator of M2-cholinoceptors, which retards [^{3}H]N-methylscopolamine dissociation. W-84 dibromide can stabilize cholinergic antagonist-receptor complexes. W-84 (dibromide) is a non-competitive muscarinic acetylcholine receptors antagonist with allosteric effects. W-84 (dibromide) protects over additively against an organophosphate-intoxication when applied in combination with atropine[1][2][3].

IC_{50} & Target

muscarinic acetylcholine receptors[1]

In Vitro

The stabilizing effect of W-84 (dibromide) on antagonist-receptor complexes may explain the overadditive protective action exerted by the combination of atropine and W-84 (dibromide) against organophosphate intoxication[1]. W-84 (dibromide) not only inhibits radioligand association but also strongly stabilizes antagonist-receptor complexes[2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Jepsen K, et al. Allosteric stabilization of 3H-N-methylscopolamine binding in guinea-pig myocardium by an antidote against organophosphate intoxication. Pharmacol Toxicol. 1988;63(3):163-168.

[2]. Mohr K, et al. Equipotent allosteric effect of W84 on [3H]NMS-binding to cardiac muscarinic receptors from guinea-pig, rat, and pig. Pharmacol Toxicol. 1992;70(3):198-200.

[3]. Grossmüller M, et al. Allosteric site in M2 acetylcholine receptors: evidence for a major conformational change upon binding of an orthosteric agonist instead of an antagonist. Naunyn Schmiedebergs Arch Pharmacol. 2006;372(4):267-276.

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