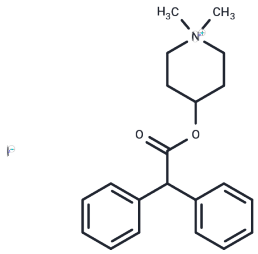
Data Sheet (Cat.No.T22511)

TargetMol

4-DAMP

Chemical Properties



CAS No. : 1952-15-4

Formula: C21H26INO2

Molecular Weight: 451.34

Storage: Store at low temperature,Keep away from direct sunlight
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	4-DAMP (4-DAMP methiodide) is a selective muscarinic M1 and M3 subtype receptor antagonist used in the study of allergic rhinitis and cardiovascular disease.
Targets(IC50)	Apoptosis,MMP,EGFR,AChR,Interleukin
In vitro	4-DAMP apparent affinities (pKB) at the muscarinic M3 receptor was 8.8, pKi=9.3. 4-DAMP apparent affinities (pKB) at the muscarinic M5 receptor was 8.6, pKi=8.9 . [1]
In vivo	An AR model was established by inducing male guinea pigs (4-6 weeks of age) with ovalbumin. 4-DAMP group animals were treated with ipratropium bromide (0.6 mg/kg) and 4-DAMP (0.12 or 0.6 mg/kg) by intranasal instillation per nostril daily. The AR symptom scores and nasal secretion weights of animals treated with 4-DAMP were reduced significantly, goblet cell metaplasia was reversed, and eosinophil infiltration was visibly alleviated. [2]

Solubility Information

Solubility	DMSO: 80 mg/mL (177.25 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 5 mg/mL (11.08 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.2156 mL	11.0781 mL	22.1562 mL
5 mM	0.4431 mL	2.2156 mL	4.4312 mL
10 mM	0.2216 mL	1.1078 mL	2.2156 mL
50 mM	0.0443 mL	0.2216 mL	0.4431 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Watson N, et al. Comparative pharmacology of recombinant human M3 and M5 muscarinic receptors expressed in CHO-K1 cells. Br J Pharmacol. 1999 May;127(2):590-6.
Huang Y, et al. Effects of 4-DAMP on allergic rhinitis in guinea pigs and its potential mechanism. Ann Transl Med. 2022 Jul;10(14):774.
Einhauer A, Jungbauer A (2000) Kinetics and thermodynamical properties of the monoclonal antibody M1 directed against the FLAG peptide. 20th International symposium on the separation of proteins, peptides, and polynucleotides (ISPPP). Lublijana, Slovenia, November 5-8, 2000.
Bucher MH, Evdokimov AG, Waugh DS (2002) Differential effects of short affinity tags on the crystallization of Pyrococcus furiosus maltodextrin-binding protein. Biol Cryst 58:392-397.

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