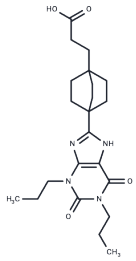
Data Sheet (Cat.No.T17117)

TargetMol

Tonapofylline

Chemical Properties



CAS No. : 340021-17-2

Formula: C22H32N4O4

Molecular Weight: 416.51

Storage: 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	Tonapofylline is an orally active and selective antagonist of the A1 adenosine receptor (Ki: 7.4 nM for human A1). Tonapofylline can be used in studies about heart failure.
Targets(IC50)	Adenosine Receptor
In vivo	Tonapofylline (1 mg/kg; p.o.) sustainably reduces the levels of post-Cisplatin serum creatinine and blood urea nitrogen and improves body weight recovery and significant attenuation of Cisplatin-induced (5.5 mg/kg) kidney pathology scores [3].

Solubility Information

Solubility	DMSO: 90 mg/mL (216.08 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: 3.3 mg/mL (7.92 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	2.4009 mL	12.0045 mL	24.009 mL
5 mM	0.4802 mL	2.4009 mL	4.8018 mL
10 mM	0.2401 mL	1.2005 mL	2.4009 mL
50 mM	0.048 mL	0.2401 mL	0.4802 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

Kiesman WF, et al. Potent and orally bioavailable 8-bicyclo[2.2.2]octylxanthines as adenosine A1 receptor antagonists. J Med Chem. 2006 Nov 30;49(24):7119-31.
Ensor CR, et al. Tonapofylline: a selective adenosine-1 receptor antagonist for the treatment of heart failure. Expert Opin Pharmacother. 2010 Oct;11(14):2405-15.
Gill A, et al. Protective effect of tonapofylline (BG9928), an adenosine A1 receptor antagonist, against cisplatin-induced acute kidney injury in rats. Am J Nephrol. 2009;30(6):521-6.