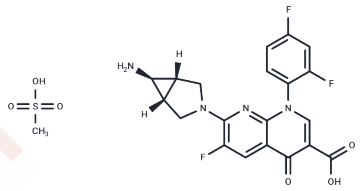
Data Sheet (Cat.No.T13231L)

TargetMol

Trovafloxacin mesylate

Chemical Properties



CAS No. :	147059-75-4
Formula:	C21H19F3N4O6S
Molecular Weight:	512.46
Storage:	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	Trovafloxacin is a broad-spectrum fluoroquinolone antibiotic that inhibits the activity of DNA gyrase and topoisomerase IV, enzymes involved in DNA replication. It also acts as an effective and specific inhibitor of the pannexin 1 channel (PANX1, IC50 = 4 μM).
Targets(IC50)	Antibacterial,Antibiotic,DNA/RNA Synthesis,Topoisomerase,TRP/TRPV Channel
In vitro	Trovafloxacin mesylate is an inhibitor of TO-PRO-3 uptake by apoptotic cells and inhibits ATP release from apoptotic cells. Trovafloxacin mesylate does not inhibit caspase 3/7 activation, or caspase-mediated PANX1 cleavage during apoptosis[1]. Trovafloxacin mesylate is equally active against both penicillin-susceptible and -resistant pneumococci, with MICs of 0.06-0.25 mg/mL reported for more than 700 isolates. The MICs of Trovafloxacin mesylate at which 90% of isolates are inhibited for 55 isolates of pneumococci is 0.125 μg/mL[2]. Trovafloxacin mesylate prolongs TNF-induced activation of MAPKs and IKKα/β activation in HepG2 cells. Trovafloxacin mesylate (20 μM; 24 hours) and tumor necrosis factor (TNF; 4 ng/mL) incubation induces apoptosis and increases leakage of lactate dehydrogenase (LDH). Trovafloxacin mesylate (20 μM; 24 hours) and TNF (4 ng/mL) incubation increases expression of early NF-κB-related factors A20 and IκBα[3].

Solubility Information

Solubility	DMSO: 120 mg/mL (234.16 mM),Sonication and heating to 60°C are recommended. H2O: 18 mg/mL (35.12 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: 4 mg/mL (7.81 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	1.9514 mL	9.7569 mL	19.5137 mL
5 mM	0.3903 mL	1.9514 mL	3.9027 mL
10 mM	0.1951 mL	0.9757 mL	1.9514 mL
50 mM	0.039 mL	0.1951 mL	0.3903 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

Giustarini G, et al. The hepatotoxic fluoroquinolone trovafloxacin disturbs TNF- and LPS-induced p65 nuclear translocation in vivo and in vitro. Toxicol Appl Pharmacol. 2020 Mar 15;391:114915.
Gootz TD, et al. Activity of the new fluoroquinolone trovafloxacin (CP-99,219) against DNA gyrase and topoisomerase IV mutants of Streptococcus pneumoniae selected in vitro. Antimicrob Agents Chemother. 1996 Dec;40(12):2691-7.
Poon IK, et al. Unexpected link between an antibiotic, pannexin channels and apoptosis. Nature. 2014 Mar 20;507 (7492):329-34.