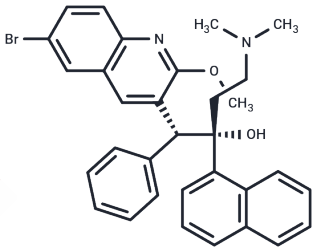
Data Sheet (Cat.No.T2585)

TargetMol

Bedaquiline

Chemical Properties



CAS No. : 843663-66-1

Formula: C32H31BrN2O2

Molecular Weight: 555.5

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	Bedaquiline (R207910) is an anti-tuberculosis drug which selectively inhibit the mycobacterial energy metabolism i.e. ATP synthesis and found to be effective against all states of Mycobacterium tuberculosis.
Targets(IC50)	Antibacterial,Antibiotic
In vitro	Bedaquiline inhibits TDR M. tuberculosis strains with MIC values between 0.125 and 0.5 mg/L[1]. It shows the highest activity against Mycobacterium avium among slowly growing mycobacteria (SGM), with MIC50 and MIC90 values of 0.03 and 16 mg/L. Among rapidly growing mycobacteria (RGM), it is more effective against Mycobacterium abscessus subsp. abscessus (M. abscessus) and Mycobacterium abscessus subsp. massiliense (M. massiliense) than Mycobacterium fortuitum, with MIC50 and MIC90 values of 0.13 and >16 mg/L. Bedaquiline also exhibits moderate in vitro activity against NTM species[2] and excellent in vitro activity against Mycobacterium tuberculosis, including multidrug-resistant strains[3].

Solubility Information

Solubility	DMSO: 5.56 mg/mL (10 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.8002 mL	9.0009 mL	18.0018 mL
5 mM	0.360 mL	1.8002 mL	3.6004 mL
10 mM	0.180 mL	0.9001 mL	1.8002 mL
50 mM	0.036 mL	0.180 mL	0.360 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.

Reference

Jang JC, et al. Bedaquiline susceptibility test for totally drug-resistant tuberculosis Mycobacterium tuberculosis. J Microbiol. 2017 Apr 20.

Briffotaux J, Xu Y, Huang W, et al. A Hydrazine-Hydrazone Adamantine Compound Shows Antimycobacterial Activity and Is a Probable Inhibitor of MmpL3. Molecules. 2022, 27(20): 7130.

Wang G, Dong W, Lu H, et al. Enniatin A1, A Natural Compound with Bactericidal Activity against Mycobacterium tuberculosis In Vitro. Molecules. 2020, 25(1): 38

Pang Y, et al. In Vitro Activity of Bedaquiline against Nontuberculous Mycobacteria in China. Antimicrob Agents Chemother. 2017 Apr 24;61(5).

Chahine EB, et al. Bedaquiline: a novel diarylquinoline for multidrug-resistant tuberculosis. Ann Pharmacother. 2014 Jan;48(1):107-15.

Dong W, Wang G, Bai Y, et al.Repurposing an Antioxidant to Kill Mycobacterium tuberculosis by Targeting the 50S Subunit of the Ribosome.Biomolecules.2023, 13(12): 1793.

Wang G, Dong W, Lu H, et al. Enniatin A1, A Natural Compound with Bactericidal Activity against Mycobacterium tuberculosis In Vitro[J]. Molecules. 2020, 25(1): 38.