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Produktinformation

- Forschungsprodukte & Biochemikalien
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- Diagnostik & molekulare Diagnostik
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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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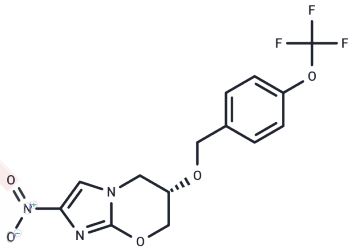
Data Sheet (Cat.No.T6096)

TargetMol

Pretomanid

Chemical Properties



CAS No. : 187235-37-6

Formula: C14H12F3N3O5

Molecular Weight: 359.26

Appearance: no data available

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

Biological Description

Description	Pretomanid ((S)-PA 824) , a nitroimidazole, is used as an anti-tuberculosis drug for tuberculosis with MIC less than 2.8 μM.
Targets(IC50)	Antibacterial,Antibiotic
In vitro	In vitro, PA-824 exhibits the high activity against multidrug-resistant Clinicalal isolates from Asia (India and South Korea) and from throughout the United States (MIC < 1 μg/ml) and is equally active against the drug-sensitive and multidrug-resistant isolates of M. tuberculosis (MICs range, 0.039 to 0.531 μg/ml). [1] A recent study shows that single-nucleotide polymorphisms of PA-824 resistance genes (fgd1 [Rv0407] and ddn [Rv3547]) don't significantly affect the PA-824 MICs (≤ 0.25 μg/ml). [2]
In vivo	In the rapid tuberculosis mouse model, PA-824 shows significant anti-microbial activity in a dose-dependent manner: at 50 mg/kg, PA-824 in MC produces a more than 1-log reduction of the CFU in the lungs; at 100 mg/kg it produces about a 2-log reduction, and at 300 mg/kg it produces a 3-log reduction. Furthermore, long-term treatment of PA-824 at 100 mg/kg in cyclodextrin/lecithin also leads to the reduction of the bacterial load below 500 CFU in the lungs and spleen. [1] PA-824 exhibits time-dependent anti-microbial activity in a murine model of tuberculosis with a maximal observed bactericidal effect of 0.1 log CFU/day over 24 days. [3]
Kinase Assay	Isolated kinase assays: The intracellular kinase domains of human EGFR and erbB2 are cloned and expressed in the baculovirus/Sf21 system. The inhibitory activity of AZD8931 is determined with ATP at Km concentrations (0.4 mM for erbB2 and 2 mM for EGFR) using the ELISA method.
Cell Research	A method is used to determine the MICs by a microdilution plate assay by using M. tuberculosis H37Rv. INH is dissolved in sterile, double-distilled water at a stock concentration of 500 μg/ml. PA-824 is dissolved in 100% dimethyl sulfoxide (DMSO) to a stock concentration of 100 μg/ml. A 1:2 dilution series of both compounds is made in a separate 96-well microtiter plate by using the same diluents. The interior 60 wells of a 96-well round-bottom microtiter assay plate are seeded with 98 μl of bacterial suspension. Two microliters of each drug is transferred to the assay plate wells containing bacteria. The final concentrations of INH in the wells range from 10.0 to 0.039 μg/mL; the final concentrations of PA-824 range from 2.0 μg/mL to 8.0 pg/mL. The assay plates are incubated at 37 °C for at least 21 days and are observed every 3 to 4 days to evaluate changes in growth. Inhibition of growth is determined both by visual

	examination and with a spectrophotometer at an OD600.(Only for Reference)

Solubility Information

Solubility	H2O: < 1 mg/mL (insoluble or slightly soluble), DMSO: 67 mg/mL (186.5 mM), Ethanol: 13 mg/mL (36.2 mM), (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.7835 mL	13.9175 mL	27.835 mL
5 mM	0.5567 mL	2.7835 mL	5.567 mL
10 mM	0.2783 mL	1.3917 mL	2.7835 mL
50 mM	0.0557 mL	0.2783 mL	0.5567 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

Zhang R, Luo S, Wang N, et al.Epidemiology of Nontuberculous Mycobacteria in Nanjing and MAB_0540 Mutations Associated with Clofazimine Resistance in Mycobacterium abscessus.Infection and Drug Resistance.2023: 2751-