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Laborgeräte & Service

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Lieferung & Zahlungsart

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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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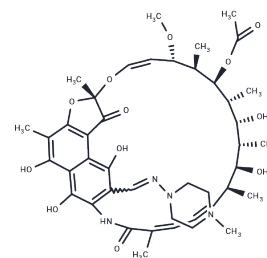
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Rifampicin

Chemical Properties

CAS No. :	13292-46-1
Formula:	C ₄₃ H ₅₈ N ₄ O ₁₂
Molecular Weight:	822.94
Appearance:	no data available
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year



Biological Description

Description	Rifampicin (Rifamycin AMP) is a broad-spectrum antibiotic. Rifampicin has a strong antibacterial effect against Mycobacterium tuberculosis and is also effective against gram-positive and gram-negative bacteria and viruses.
Targets(IC50)	Influenza Virus,DNA/RNA Synthesis,Antibacterial,Antibiotic,Antifection
In vitro	<p>METHODS: PC12 cells were treated with Rifampicin (25-100 μM) for 3-24 h. The expression levels of target proteins were detected by Western Blot.</p> <p>RESULTS: At 6 h of incubation, Rifampicin induced a significant increase in GRP78 protein expression in PC12 cells. Prolonged incubation with Rifampicin further enhanced the induction of GRP78 up to 24 h. PC12 cells showed a dose-dependent induction of GRP78 when incubated with Rifampicin at concentrations in the 25-100 μM range. [1]</p> <p>METHODS: Human colon cancer cells LS180 were treated with Rifampicin (10 μM) for 24-144 h. Gene levels were measured by RT-PCR.</p> <p>RESULTS: The total expression of NR112 mRNA was reduced by 40% after 24 h of Rifampicin treatment, and the expression of PXR.3 mRNA was reduced by 45% after 24 h of Rifampicin treatment. [2]</p>
In vivo	<p>METHODS: To study in vivo bactericidal activity, Rifampicin (40 mg/kg) and isoniazid (25 mg/kg) were administered by gavage to mice injected intravenously with Mycobacterium tuberculosis once daily for 12 weeks.</p> <p>RESULTS: The daily administration of Rifampicin and isoniazid for 12 weeks did not reduce the number of Mycobacterium tuberculosis in the lungs and spleens of any of the animals below detectable levels, either when treatment was started immediately or delayed for three weeks. On the other hand, when both drugs were administered concurrently over the same period of time, the lungs and spleens of all but one of the 30 animals appeared to be sterilized with Mycobacterium tuberculosis. [3]</p>

Solubility Information

Solubility	DMSO: 50 mg/mL (60.76 mM), Ethanol: < 1 mg/mL (insoluble or slightly soluble), < 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.2152 mL	6.0758 mL	12.1516 mL
5 mM	0.243 mL	1.2152 mL	2.4303 mL
10 mM	0.1215 mL	0.6076 mL	1.2152 mL
50 mM	0.0243 mL	0.1215 mL	0.243 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 Y, Cai Y, Wang T, et al. A common tolerance mechanism of bacterial biofilms to antibiotics. *bioRxiv*. 2023: 2023.01.30.526163.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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