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Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

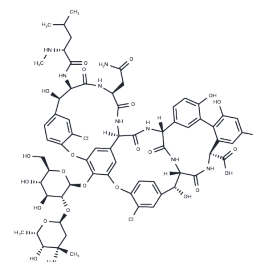
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Vancomycin

Chemical Properties

CAS No. :	1404-90-6
Formula:	C ₆₆ H ₇₅ Cl ₂ N ₉ O ₂₄
Molecular Weight:	1449.25
Appearance:	no data available
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year



Biological Description

Description	Vancomycin is a glycopeptide antibiotic that exerts its antimicrobial activity by altering the permeability of cell membranes and selectively inhibiting ribonucleic acid synthesis. Vancomycin can be used for the treatment of serious infections for which all antibiotics have failed.
Targets(IC50)	Antibacterial, Antibiotic, Autophagy
In vitro	<p>METHODS: <i>B. burgdorferi</i> was treated with Vancomycin (0.5-2.0 µg/mL) for 24 h and cell morphology was examined using real-time time-lapse microscopy.</p> <p>RESULTS: At higher concentrations of Vancomycin (≥1.0 µg/mL), many abnormal cells were observed, which were visually identified by vesiculation, granule formation, and morphological changes. The proportion of these abnormal bacteria in the population increased in a dose-dependent manner. [1]</p> <p>METHODS: Human osteosarcoma cells MG-63 were treated with Vancomycin (10-10000 µg/mL) for 24-72 h. Cell counts were measured using an Elzone Celi Counter.</p> <p>RESULTS: Localized levels of Vancomycin at 1000 µg/mL and below had little effect on osteoblast replication, and concentrations of 10,000 µg/mL resulted in cell death. [2]</p>
In vivo	<p>METHODS: To detect nephrotoxicity, Vancomycin (400 mg/kg) and Vitamin C (200 mg/kg) were administered intraperitoneally to C57BL/6J mice once daily for seven days.</p> <p>RESULTS: Renal index, renal injury score, apoptosis, serum Cr and BUN, as well as renal Cr, BUN, MDA, IL-1β, IL-6, TNF-α, and NF-κB were higher in the Vancomycin group than in the control group, whereas body weight and renal SOD activity were lower. On the contrary, no differences were observed between the control and Vitamin C groups in all these indices. [3]</p> <p>METHODS: To deplete the intestinal microbiota of mice, the antibiotics (ABX) Vancomycin (0.5 g/L), Ampicillin (1 g/L), Neomycin sulfate (1 g/L), and metronidazole (1 g/L) were administered to mice by drinking water for two weeks.</p> <p>RESULTS: Antibiotics significantly reduced the diversity and composition of the gut microbiota. [4]</p>

Solubility Information

Solubility	DMSO: 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	0.690 mL	3.4501 mL	6.9001 mL
5 mM	0.138 mL	0.690 mL	1.380 mL
10 mM	0.069 mL	0.345 mL	0.690 mL
50 mM	0.0138 mL	0.069 mL	0.138 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

Shan T, Huang Y, Zhao Z, et al. Ketogenic diet restrains herpes simplex encephalitis via gut microbes. *Microbes and Infection*. 2022: 105061.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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Tel:781-999-4286 E_mail:info@targetmol.com Address:36 Washington Street,Wellesley Hills,MA 02481