SZABO SCANDIC

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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

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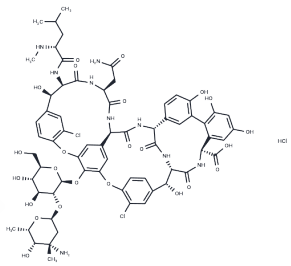
Data Sheet (Cat.No.T0832)

TargetMol

Vancomycin hydrochloride

Chemical Properties



CAS No. : 1404-93-9

Formula: C66H76Cl3N9O24

Molecular Weight: 1485.71

Appearance: no data available

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

Biological Description

Description	Vancomycin hydrochloride (Vancomycin HCl) is the hydrochloride salt of vancomycin, a branched tricyclic glycosylated peptide with bactericidal activity against most organisms and bacteriostatic effect on enterococci.
Targets(IC50)	Cell wall,Antibacterial,Antibiotic,Autophagy
In vitro	Vancomycin, a substantial glycopeptide antibiotic with a molecular weight of 1450 Da [1], stands out due to its unique structure and mode of action, distinguishing it from all currently available antibiotics. Its distinctive mechanism targets and inhibits the second stage of cell wall synthesis in susceptible bacteria. Active against an extensive array of Gram-positive species including Staphylococcus aureus, Staph. epidermidis, Str. agalactiae, Str. bovis, Str. mutans, viridans streptococci, and enterococci[2], vancomycin is a critical asset in treating various bacterial infections.
In vivo	Vancomycin is administered via intravenous infusion over a minimum of one hour to reduce the risk of infusion-related adverse effects. In individuals with normal creatinine clearance levels, the distribution phase (α) of vancomycin spans between 30 minutes to 1 hour, while the elimination half-life (β) ranges from 6 to 12 hours. Its distribution volume lies between 0.4–1 L/kg, and its protein-binding capacity varies between 10% and 50%. The efficacy of vancomycin is influenced by factors such as tissue distribution, inoculum size, and protein-binding impacts. Furthermore, vancomycin therapy in infected mice demonstrates significant improvements in clinical outcomes, diarrhea, histopathological scores, and survival rates during the course of treatment.

Solubility Information

Solubility	H2O: 33.33 mg/mL (22.43 mM),Sonication is recommended. DMSO: 55 mg/mL (37.02 mM),Sonication and heating are recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.6731 mL	3.3654 mL	6.7308 mL
5 mM	0.1346 mL	0.6731 mL	1.3462 mL
10 mM	0.0673 mL	0.3365 mL	0.6731 mL
50 mM	0.0135 mL	0.0673 mL	0.1346 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 Z, Ye J, Liu X, et al.Huangqi Guizhi Wuwu decoction alleviates oxaliplatin-induced peripheral neuropathy via the gut-peripheral nerve axis.Chinese Medicine.2023, 18(1): 1-15.