

Vancomycin (hydrochloride)

Catalog No: tcsc0908



Available Sizes

Size: 250mg

Size: 1g



Specifications

CAS No:

1404-93-9

Formula:

$C_{66}H_{76}Cl_3N_9O_{24}$

Pathway:

Anti-infection;Autophagy

Target:

Bacterial;Autophagy

Purity / Grade:

>98%

Solubility:

DMSO : 24 mg/mL (16.15 mM; Need ultrasonic and warming); H2O : 33.33 mg/mL (22.43 mM; Need ultrasonic)

Observed Molecular Weight:

1485.72

Product Description

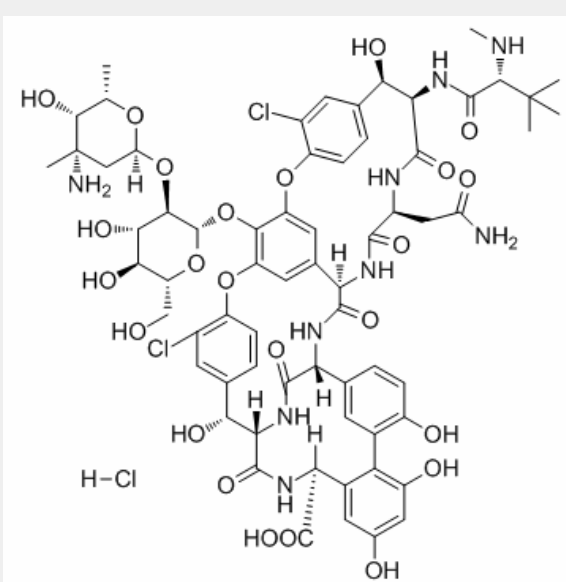
Vancomycin hydrochloride is an antibiotic for the treatment of **bacterial** infections. It acts by inhibiting the second stage of cell wall synthesis of susceptible bacteria. Vancomycin also alters the permeability of the cell membrane and selectively inhibits ribonucleic acid synthesis.

IC50 & Target: Bacterial^[1]

In Vitro:

Vancomycin is a large glycopeptide compound with a molecular weight of 1450 Da^[1]. Vancomycin is a unique glycopeptide structurally unrelated to any currently available antibiotic. It also has a unique mode of action inhibiting the second stage of cell wall synthesis of susceptible bacteria. Vancomycin is active against a large number of species of Gram-positive bacteria, such as *Staphylococcus aureus*, *Staph. epidermidis*, *Str. agalactiae*, *Str. bovis*, *Str. mutans*, *viridans streptococci*, *enterococci*^[2].

In Vivo: Vancomycin is administered intravenously, with a standard infusion time of at least 1 h, to minimize infusion-related adverse effects. Subjects with normal creatinine clearance, vancomycin has an α -distribution phase of 30 min to 1 h and a β -elimination half-life of 6-12 h. The volume of distribution is 0.4-1 L/kg. The binding of vancomycin to protein ranges from 10% to 50%. Factors that affect the overall activity of vancomycin include its tissue distribution, inoculum size, and protein-binding effects^[1]. Vancomycin treatment of infected mice is associated with improved clinical, diarrhea, and histopathology scores and survival during treatment^[3].



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