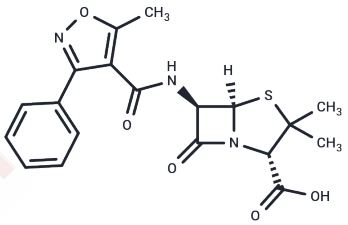
Data Sheet (Cat.No.T61951)

TargetMol

Oxacillin

Chemical Properties



CAS No. : 66-79-5

Formula: C19H19N3O5S

Molecular Weight: 401.44

Storage: Keep away from moisture
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Oxacillin (Oxabel) is an orally active and antibacterial penicillin antibiotic. It works by inhibiting bacterial cell wall synthesis and exerting bactericidal effects.
Targets(IC50)	Antibacterial,Antibiotic
In vitro	Oxacillin has extensive inhibition of gram-positive bacteria. The MIC of Oxacillin against Streptococcus A, pneumococcus, sensitive Staphylococcus and penicillin-resistant staphylococcus were 0.05, 0.09, 0.32 and 0.80 μg/mL, respectively.[1]
In vivo	In a mouse model of Staphylococcus aureus Evans infection, Oxacillin was subcutaneously administered with 253.3 mg/kg CD50 and orally administered with 187.2 mg/kg CD50. [2]

Solubility Information

Solubility	DMSO: 135 mg/mL (336.29 mM) (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Saline: 10 mg/mL (24.91 mM),Suspension. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.491 mL	12.4552 mL	24.9103 mL
5 mM	0.4982 mL	2.491 mL	4.9821 mL
10 mM	0.2491 mL	1.2455 mL	2.491 mL
50 mM	0.0498 mL	0.2491 mL	0.4982 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.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Santos SCL, et al. Swine as reservoirs of zoonotic borderline oxacillin-resistant Staphylococcus aureus ST398. Comp Immunol Microbiol Infect Dis. 2021 Dec;79:101697.
Yurchenco JA, et al. Nafcillin and oxacillin: comparative antistaphylococcal activity in mice. J Antibiot (Tokyo). 1976 Apr;29(4):460-5.
KIRBY WM, et al. Oxacillin: laboratory and clinical evaluation. JAMA. 1962 Sep 1;181:739-44.