Eperezolid

Cat. No.: HY-10393

CAS No.: 165800-04-4

Molecular Formula: $C_{18}H_{23}FN_4O_5$

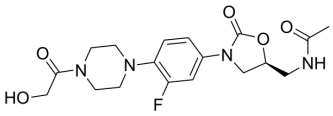
Molecular Weight: 394.4

Target: Bacterial; Antibiotic

Pathway: Anti-infection

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	2 years
	-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 44 mg/mL (111.56 mM; Need ultrasonic and warming)

Preparing Stock Solutions

Concentration \ Solvent \ Mass	1 mg	5 mg	10 mg
1 mM	2.5355 mL	12.6775 mL	25.3550 mL
5 mM	0.5071 mL	2.5355 mL	5.0710 mL
10 mM	0.2535 mL	1.2677 mL	2.5355 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

Eperezolid(PNU-100592) is a oxazolidinone antibacterial agent, Eperezolid demonstrated good in vitro inhibitory activity, regardless of methicillin susceptibility for staphylococci(MIC90= 1-4 mg/ml).IC50 value: 1-4 mg/ml (MIC90, staphylococci) [1]Target: AntibioticEperezolid binds specifically to the 50S ribosomal subunit of Escherichia coli. The specific binding of eperezolid is dose dependent and is proportional to the ribosome concentrations. Scatchard analysis of the binding data reveals that the dissociation constant (Kd) is about 20 microM. The binding of eperezolid to the ribosome is competitively inhibited by chloramphenicol and lincomycin. However, unlike chloramphenicol and lincomycin, eperezolid does not inhibit the puromycin reaction, indicating that the oxazolidinones have no effect on peptidyl transferase [2]. eperezolid was found to bind only to the 50S subunit, with similar affinity as to the 70S ribosome, and to have no affinity for the 30S subunit [3].

IC_{50} & Target

Oxazolidinone

REFERENCES

[1]. Rybak MJ, et al. Comparative in vitro activities and postantibiotic effects of the oxazolidinone compounds eperezolid (PNU-100592) and linezolid (PNU-100766) versus

vancomycin against Staphylococcus aureus, coagulase-negative staphylococci, Enterococcus faecalis, and Enterococcus faecium. Antimicrob Agents Chemother. 1998 Mar;42(3):721-4.

[2]. Lin AH, et al. The oxazolidinone eperezolid binds to the 50S ribosomal subunit and competes with binding of chloramphenicol and lincomycin. Antimicrob Agents Chemother. 1997 Oct;41(10):2127-31.

[3]. Zhou CC, et al. 1H nuclear magnetic resonance study of oxazolidinone binding to bacterial ribosomes. Antimicrob Agents Chemother. 2002 Mar;46(3):625-9.

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