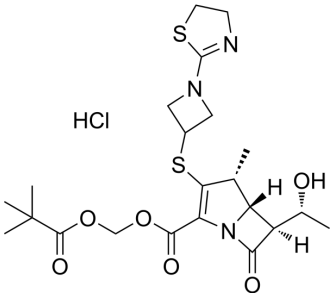
Tebipenem pivoxil hydrochloride

Cat. No.:	HY-B0396A
CAS No.:	211558-19-9
Molecular Formula:	$C_{22}H_{32}ClN_3O_6S_2$
Molecular Weight:	534.09
Target:	Antibiotic; Bacterial; Penicillin-binding protein (PBP)
Pathway:	Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Tebipenem pivoxil (L084) hydrochloride is an orally active antibiotic against a variety of pathogenic bacteria. Tebipenem pivoxil hydrochloride binds penicillin-binding protein (PBP), thereby inhibiting cell wall synthesis[1].
IC_{50} & Target	β-lactam

In Vitro

Tebipenem pivoxil hydrochloride (0-128 μg/mL, 18–24 h) displays excellent antibacterial activity against a variety of pathogenic bacteria[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[1]

Cell Line:	Gram-positive and Gram-negative bacteria
Concentration:	0-128 μg/mL
Incubation Time:	18–24 h
Result:	Showed inhibition with MIC_{50}s below 64 μg/mL against tested Gram-positive and Gram-negative bacteria.

In Vivo

Tebipenem pivoxil (L084) (0-4.00 g/kg; p.o.; once) hydrochloride shows minimal lethal dosage (MLD) of 4.00 g/kg and the maximum tolerance dosage (MTD) of 3.40 g/kg in mice[1].

Tebipenem pivoxil (50 and 100 mg/kg; p.o.; once) hydrochloride significantly protects the sepsis mice challenged with various pathogenic bacteria[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	KM mice weighing 18–22 g[1]
Dosage:	2.89, 3.40 and 4.00 g/kg
Administration:	Oral administration (tablet), once
Result:	Within the 14-day observation period, only one mouse was dead in the maximum oral dosage (4.00 g/kg). The minimal lethal dosage (MLD) was 4.00 g/kg and the maximum

	tolerance dosage (MTD) in the mice was 3.40 g/kg. Showed dose-dependent liver and kidney damage.

Animal Model:	ICR mice, sepsis mouse models[1]
Dosage:	50 and 100 mg/kg
Administration:	Oral administration (tablet), once
Result:	Significantly increased the survival number of the sepsis mice within a 168 h observation period.

REFERENCES

[1]. Yao Q, et al. Antibacterial Properties of Tebipenem Pivoxil Tablet, a New Oral Carbapenem Preparation against a Variety of Pathogenic Bacteria in Vitro and in Vivo. Molecules. 2016 Jan 6;21(1):62.

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