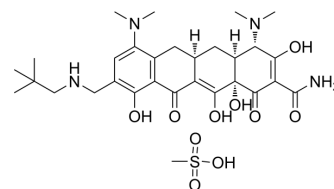


Omadacycline mesylate

Cat. No.:	HY-14865A
CAS No.:	1196800-40-4
Molecular Formula:	C ₃₀ H ₄₄ N ₄ O ₁₀ S
Molecular Weight:	652.76
Target:	Bacterial; Antibiotic
Pathway:	Anti-infection
Storage:	4°C, sealed storage, away from moisture and light * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



BIOLOGICAL ACTIVITY

Description	Omadacycline (PTK 0796) mesylate, a first-in-class orally active aminomethylcycline antibacterial, is a member of the tetracycline class of antibiotics. Omadacycline mesylate acts through the inhibition of bacterial protein synthesis by binding to the 30S ribosomal subunit. Omadacycline mesylate possesses broad-spectrum antibacterial activity against aerobic and anaerobic Gram-positive and Gram-negative bacteria, as well as atypical bacteria. Omadacycline mesylate can be used for the research of acute bacterial skin and skin-structure infections, community-acquired pneumonia, and urinary tract infections ^{[1][2][3][4]} .
IC₅₀ & Target	Tetracycline
In Vitro	Omadacycline displays activity against methicillin-resistant <i>Staphylococcus aureus</i> (MRSA), vancomycin-resistant <i>Enterococcus</i> (VRE), beta-hemolytic streptococci, penicillin-resistant <i>Streptococcus pneumoniae</i> (PRSP) and <i>Haemophilus influenzae</i> (<i>H. influenzae</i>), with MIC ₉₀ s of 1.0, 0.25, 0.5, 0.25 and 2.0 µg/mL respectively ^[2] . Omadacycline is active against strains expressing tetracycline and other antibiotics resistance by ribosomal protection and active tetracycline efflux ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Omadacycline (0.11-18 mg/kg; a single i.v.) exhibits efficacy against <i>Streptococcus pneumoniae</i> , <i>Escherichia coli</i> , and <i>Staphylococcus aureus</i> in mice systemic infection model, with ED ₅₀ s ranging from 0.30 mg/kg to 3.39 mg/kg ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Nat Microbiol. 2023 Mar;8(3):410-423.
- Nat Struct Mol Biol. 2023 Aug 7.
- PLoS Biol. 2022 Sep 28;20(9):e3001808.
- J Clin Microbiol. 2020 Jan 28;58(2):e01603-19.
- Virulence. 2022 Dec;13(1):77-88.

See more customer validations on www.MedChemExpress.com

REFERENCES

- [1]. Durães F, et, al. Omadacycline: A Newly Approved Antibacterial from the Class of Tetracyclines. *Pharmaceuticals (Basel)*. 2019 Apr 21;12(2):63.
- [2]. Macone AB, et, al. In vitro and in vivo antibacterial activities of omadacycline, a novel aminomethylcycline. *Antimicrob Agents Chemother*. 2014;58(2):1127-35.
- [3]. Zhanel GG, et, al. Omadacycline: A Novel Oral and Intravenous Aminomethylcycline Antibiotic Agent. *Drugs*. 2020 Feb;80(3):285-313.
- [4]. Markham A, et, al. Omadacycline: First Global Approval. *Drugs*. 2018 Dec;78(18):1931-1937.
-

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA