Voxvoganan trihydrochloride

Cat. No.: HY-119123A

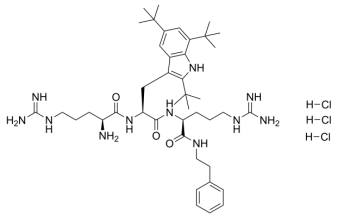
Molecular Formula: $C_{43}H_{72}Cl_3N_{11}O_3$

Molecular Weight: 897.46

Target: Fungal; Bacterial

Pathway: Anti-infection

Storage: 4°C, stored under nitrogen
* In solvent : -80°C, 6 months; -20°C, 1 month (stored under nitrogen)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 140 mg/mL (156.00 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.1143 mL	5.5713 mL	11.1426 mL
	5 mM	0.2229 mL	1.1143 mL	2.2285 mL
	10 mM	0.1114 mL	0.5571 mL	1.1143 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 3.5 mg/mL (3.90 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 3.5 mg/mL (3.90 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 3.5 mg/mL (3.90 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Voxvoganan (LTX-109) trihydrochloride, a topical antimicrobial, is highly effective against S. aureus with a MIC range of 2 to 4 μg/mL. Voxvoganan trihydrochloride can be used for the research of bacterial skin infections, fungal infections and nasal decolonisation of MRSA[1][2].

In Vitro

Voxvoganan trihydrochloride (LTX-109) is an investigational antimicrobial agent with a membrane-lysing mechanism of action, based on the biological principle of innate immune effectors, lytic peptides. Voxvoganan trihydrochloride has a rapid bactericidal lytic activity. Voxvoganan trihydrochloride demonstrates in vitro bactericidal activity against a number of S. aureus isolates resistant to several classes of antimicrobial agents evaluated in this study[2].
Voxvoganan trihydrochloride (LTX-109) is a broad-spectrum, fast-acting bactericidal antimicrobial agent that binds to

negatively charged membrane components on the bacterial cell wall, which leads to membrane disruption and cell lysis. Voxvoganan trihydrochloride is a first-in-class chemically synthesized, small peptide drug that is stable against protease degradation. Topical application of Voxvoganan trihydrochloride has a good safety profile and a low bioavailability. Voxvoganan trihydrochloride demonstrates good activity against Staphylococcus aureus strains that are susceptible and resistant to mupirocin[3].

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

REFERENCES

[1]. Johan Isaksson, et al. A synthetic antimicrobial peptidomimetic (LTX 109): stereochemical impact on membrane disruption. J Med Chem. 2011 Aug 25;54(16):5786-95.

[2]. Louis D Saravolatz, et al. In vitro activities of LTX-109, a synthetic antimicrobial peptide, against methicillin-resistant, vancomycin-intermediate, vancomycin-resistant, daptomycin-nonsusceptible, and linezolid-nonsusceptible Staphylococcus aureus. Antimicrob Agents Chemother. 2012 Aug;56(8):4478-82.

[3]. L D Saravolatz, et al. Postantibiotic effect and postantibiotic sub-MIC effect of LTX-109 and mupirocin on Staphylococcus aureus blood isolates. Lett Appl Microbiol. 2017 Nov;65(5):410-413.

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