MRL-494 hydrochloride

Cat. No.: HY-128773A

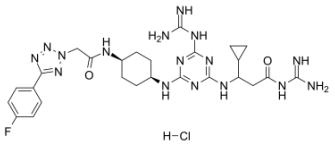
Molecular Formula: $C_{26}H_{36}ClFN_{16}O_2$

Molecular Weight: 659.12

Target: Bacterial

Pathway: Anti-infection

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



SOLVENT & SOLUBILITY

In Vitro

H_2O : 110 mg/mL (166.89 mM; Need ultrasonic)
DMSO : 100 mg/mL (151.72 mM; Need ultrasonic)

Preparing Stock Solutions	Concentration / Solvent / Mass	1 mg	5 mg	10 mg
	1 mM	1.5172 mL	7.5859 mL	15.1717 mL
	5 mM	0.3034 mL	1.5172 mL	3.0343 mL
	10 mM	0.1517 mL	0.7586 mL	1.5172 mL

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

BIOLOGICAL ACTIVITY

Description

MRL-494 hydrochloride, an antibacterial agent, is a inhibitor of β-barrel assembly machine A (BamA) impervious to efflux and the outer membrane permeability barrier. MRL-494 hydrochloride can inhibits Gram-positive (MIC of 12.5 μM for ***Staphylococcus aureus*** COL) and Gram-negative (MIC of 25 μM for ***E. coli*** JCM158) bacterias[1].

IC_{50} & Target

β-barrel assembly machine A (BamA)[1]

In Vitro

MRL-494 lethally disrupts the cytoplasmic membrane. MRL-494 inhibits OM proteins (OMPs) biogenesis from outside the outer membrane (OM) by targeting BamA. MRL-494 exhibits strong anti-microbial properties against both Gram-positive and Gram-negative bacteria. The MIC values of MRL-494 against E. coli (WT), E. coli (ΔtolC), E. coli (ΔtolC envA101), K. pneumonia, A. baumannii (WT), A. baumannii (ΔlpxC) , P. aeruginosa (efflux deficient), P. aeruginosa (WT), Staphylococcus aureus (methicillin-resistant) and Bacillus subtilis rpoB18 are 25 μM, 25 μM, 25 μM, 100 μM, 200 μM, 200 μM, 100 μM, 100 μM, 12.5 μM and 25 μM, respectively[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Hart EM, A small-molecule inhibitor of BamA impervious to efflux and the outer membrane permeability barrier. Proc Natl Acad Sci U S A. 2019 Oct 22;116(43):21748-21757.

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