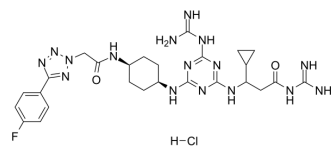


## MRL-494 hydrochloride

<b>Cat. No.:</b>	HY-128773A
<b>Molecular Formula:</b>	C <sub>26</sub> H <sub>36</sub> ClFN <sub>16</sub> O <sub>2</sub>
<b>Molecular Weight:</b>	659.12
<b>Target:</b>	Bacterial
<b>Pathway:</b>	Anti-infection
<b>Storage:</b>	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

<b>In Vitro</b>	H <sub>2</sub> O : 110 mg/mL (166.89 mM; Need ultrasonic)					
	DMSO : 100 mg/mL (151.72 mM; Need ultrasonic)					
	<b>Preparing Stock Solutions</b>	<b>Solvent</b>	<b>Mass</b>	<b>1 mg</b>	<b>5 mg</b>	<b>10 mg</b>
		<b>Concentration</b>				
		<b>1 mM</b>		1.5172 mL	7.5859 mL	15.1717 mL
<b>5 mM</b>			0.3034 mL	1.5172 mL	3.0343 mL	
<b>10 mM</b>		0.1517 mL	0.7586 mL	1.5172 mL		
Please refer to the solubility information to select the appropriate solvent.						
<b>In Vivo</b>	1. Add each solvent one by one: PBS Solubility: 25 mg/mL (37.93 mM); Clear solution; Need ultrasonic and warming					

### BIOLOGICAL ACTIVITY

<b>Description</b>	MRL-494 hydrochloride, an antibacterial agent, is a inhibitor of $\beta$ -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 $\mu$ M for <i>Staphylococcus aureus</i> COL) and Gram-negative (MIC of 25 $\mu$ M for <i>E. coli</i> JCM158) bacterias <sup>[1]</sup> .
<b>IC<sub>50</sub> &amp; Target</b>	$\beta$ -barrel assembly machine A (BamA) <sup>[1]</sup>
<b>In Vitro</b>	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 <i>E. coli</i> (WT), <i>E. coli</i> ( $\Delta$ tolC), <i>E. coli</i> ( $\Delta$ tolC envA101), <i>K. pneumonia</i> , <i>A. baumannii</i> (WT), <i>A. baumannii</i> ( $\Delta$ lpxC), <i>P. aeruginosa</i> (efflux deficient), <i>P. aeruginosa</i> (WT), <i>Staphylococcus aureus</i> (methicillin-resistant) and <i>Bacillus subtilis</i> rpoB18 are 25 $\mu$ M, 25 $\mu$ M, 25 $\mu$ M, 100 $\mu$ M, 200 $\mu$ M, 200 $\mu$ M, 100 $\mu$ M, 100 $\mu$ M, 12.5 $\mu$ M and 25 $\mu$ M, respectively <sup>[1]</sup> . 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.

---

**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](mailto:tech@MedChemExpress.com)

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