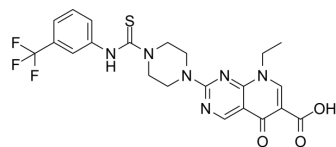


## ML328

Cat. No.:	HY-136638		
CAS No.:	634175-34-1		
Molecular Formula:	C <sub>22</sub> H <sub>21</sub> F <sub>3</sub> N <sub>6</sub> O <sub>3</sub> S		
Molecular Weight:	506.5		
Target:	Bacterial		
Pathway:	Anti-infection		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : 25 mg/mL (49.36 mM; ultrasonic and warming and heat to 60°C)

Solvent	Mass	Concentration		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	1.9743 mL	9.8717 mL	19.7433 mL
	5 mM	0.3949 mL	1.9743 mL	3.9487 mL
	10 mM	0.1974 mL	0.9872 mL	1.9743 mL

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

### BIOLOGICAL ACTIVITY

#### Description

ML328 is a selective inhibitor of bacterial AddAB and RecBCD helicase-nucleases with IC<sub>50</sub> values of 26 and 5.1 μM, respectively. ML328 is a gyrase inhibitor. ML328 strongly inhibits the growth of E. coli in the presence of phage. ML328 can be used for the research of bacterial infection<sup>[1][2]</sup>.

#### In Vitro

ML328 (0.1-1000 μM) shows AddAB and RecBCD nuclease inhibitory activities with IC<sub>50</sub> values of 26 and 5.1 μM, respectively<sup>[1]</sup>.

ML328 pathway-specifically inhibits of (high-frequency recombination) Hfr for RecBCD, RecF and RecE pathways<sup>[1]</sup>.

ML328 shows RecBCD inhibitory effects with IC<sub>50</sub> values of 3 μM for nuclease and Chi-cutting with purified enzyme, 0.3 μM for Hfr recombination and 5 μM for phage λ recombination promoted by RecBCD<sup>[2]</sup>.

ML328 inhibits E. coli RecBCD, H. pylori AddAB, M. smeg AddAB and M. smeg RecBCD with IC<sub>50</sub> values of 4.6, 16, 2.4 and 5.5 μM, respectively<sup>[2]</sup>.

ML328 (25 μM; 2 h) reduces the frequency of H<sub>2</sub>O<sub>2</sub>-induced mutation in E. coli<sup>[2]</sup>.

ML328 (25 μM; 1 h) reduces the frequency of H<sub>2</sub>O<sub>2</sub>-induced mutation to valine-resistance (valiner) in E. coli<sup>[2]</sup>.

ML328 (50 μM) slightly inhibits E. coli growth but strongly inhibits E. coli at the presence of phage<sup>[2]</sup>.

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

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## REFERENCES

- [1]. Amundsen SK, et al. Small-molecule inhibitors of bacterial AddAB and RecBCD helicase-nuclease DNA repair enzymes. ACS Chem Biol. 2012 May 18;7(5):879-91.
- [2]. SMITH GERALD R, et al. ANTIBIOTIC COMPOUNDS AND COMPOSITIONS, AND METHODS FOR IDENTIFICATION THEREOF. WO/2013/142628. 2014.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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