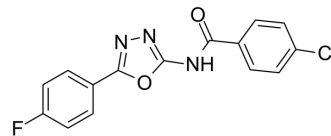


KKL-35

Cat. No.:	HY-101866		
CAS No.:	865285-29-6		
Molecular Formula:	C ₁₅ H ₉ ClFN ₃ O ₂		
Molecular Weight:	317.7		
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 : 6.25 mg/mL (19.67 mM; Need ultrasonic)

Solvent	Mass	Concentration		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	3.1476 mL	15.7381 mL	31.4762 mL
	5 mM	0.6295 mL	3.1476 mL	6.2952 mL
	10 mM	0.3148 mL	1.5738 mL	3.1476 mL

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

BIOLOGICAL ACTIVITY

Description

KKL-35 is a *trans*-translation tagging reaction inhibitor with an IC₅₀ of 0.9 μM.

IC₅₀ & Target

IC₅₀: 0.9 μM (trans-translation tagging reaction)^[1]

In Vitro

KKL-35 exhibits broad-spectrum antibiotic activity. KKL-35 prevents growth of *B. anthracis* and *M. smegmatis* with minimum inhibitory concentration (MIC) values of less than 6 μM. KKL-35 inhibit trans-translation at some step before proteolysis of tagged proteins. KKL-35 inhibits tagging of DHFR-ns. A large amount of untagged DHFR is produced in reactions with the highest concentrations of KKL-35, indicating that KKL-35 does not inhibit translation. KKL-35 prevents growth of *WT S. flexneri* with a MIC of 6 μM, and addition of KKL-35 to a growing culture of *S. flexneri* stops growth. In an *S. flexneri* strain expressing ArfA and deleted for *ssrA*, addition of KKL-35 has little effect on viability or growth rate. KKL-35 inhibits the growth of *E. coli ΔtolC*, which is deficient in small molecule efflux, with an MIC of 0.3 μM^[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Evidence suggest that the in vivo effects of KKL-35 are caused by inhibition of the release of nonstop translation complexes by trans-translation. KKL-35 inhibits trans-translation and prevents growth of *S. flexneri* strains that require trans-

translation. The correlation between inhibition of trans-translation and growth is supported by genetic and pharmacological experiments showing that alternative mechanisms to release nonstop translation complexes relieve the growth suppression of KKL-35^[1].

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

REFERENCES

[1]. Ramadoss NS, et al. Small molecule inhibitors of trans-translation have broad-spectrum antibiotic activity. Proc Natl Acad Sci U S A. 2013 Jun 18;110(25):10282-7.

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

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