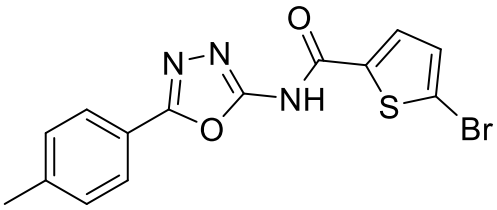
Product data sheet

MedKoo Cat#: 555140 Name: KKL-10 CAS: 952849-76-2 Chemical Formula: $C_{14}H_{10}BrN_3O_2S$ Exact Mass: 362.9677 Molecular Weight: 364.217	
Product supplied as:	Powder
Purity (by HPLC):	≥ 98%
Shipping conditions	Ambient temperature
Storage conditions:	Powder: -20°C 3 years; 4°C 2 years.
	In solvent: -80°C 3 months; -20°C 2 weeks.

1. Product description:

KKL-10 is an antimicrobial agent. KKL-10 exhibited exceptional antimicrobial activity against both attenuated and fully virulent strains of F. tularensis in vitro and during ex vivo infection. Addition of KKL-10 to macrophages or liver cells at any time after infection by F. tularensis prevented further bacterial proliferation. When macrophages were stimulated with the proinflammatory cytokine gamma interferon before being infected by F. tularensis, addition of KKL-10 reduced intracellular bacteria by >99%, indicating that the combination of cytokine-induced stress and a nonfunctional ribosome rescue pathway is fatal to F. tularensis. KKL-10 is a good lead compound for antibiotic development.

2. CoA, QC data, SDS, and handling instruction

SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under "QC And Documents" section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
DMSO	2.89	7.93

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.75 mL	13.73 mL	27.46 mL
5 mM	0.55 mL	2.75 mL	2.49 mL
10 mM	0.28 mL	1.37 mL	2.75 mL
50 mM	0.06 mL	0.28 mL	0.55 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator

Please refer the product web page under section of "Calculator"

6. Recommended literature which reported protocols for in vitro and in vivo study

In vitro study

1. Goralski TD, Dewan KK, Alumasa JN, Avanzato V, Place DE, Markley RL, Katkere B, Rabadi SM, Bakshi CS, Keiler KC, Kirimanjeswara GS. Inhibitors of Ribosome Rescue Arrest Growth of Francisella tularensis at All Stages of Intracellular Replication. Antimicrob Agents Chemother. 2016 May 23;60(6):3276-82. doi: 10.1128/AAC.03089-15. PMID: 26953190; PMCID: PMC4879415.

In vivo study

TBD

7. Bioactivity

Biological target:

KKL-10 is a small-molecule ribosome rescue inhibitor with broad-spectrum antimicrobial activity against bacteria.

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In vitro activity

The inhibitors KKL-10 and KKL-40 exhibited exceptional antimicrobial activity against both attenuated and fully virulent strains of F. tularensis in vitro and during ex vivo infection. Addition of KKL-10 or KKL-40 to macrophages or liver cells at any time after infection by F. tularensis prevented further bacterial proliferation.

Reference: Antimicrob Agents Chemother. 2016 May 23;60(6):3276-82. https://pubmed.ncbi.nlm.nih.gov/26953190/

In vivo activity

TBD

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.