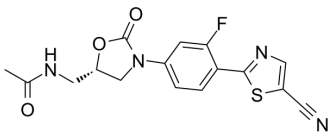
PNU-176798

Cat. No.:	HY-100306
CAS No.:	428861-91-0
Molecular Formula:	$C_{16}H_{13}FN_4O_3S$
Molecular Weight:	360.36
Target:	Bacterial
Pathway:	Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	PNU-176798 is an antimicrobial agent, targeting protein synthesis in a wide spectrum of gram-positive and anaerobic bacteria.
IC_{50} & Target	Bacterial[1]
In Vitro	PNU-176798 is an antimicrobial agent, with a minimum inhibitory concentration (MIC) of 1.4 μM for E. coli. PNU-176798 inhibits fMet-tRNA binding to the 70S ribosomes, with an IC_{50} of 32 μM. PNU-176798 also blocks translation, 70S initiation with IC_{50}s of 0.53, and 32 μM, respectively. PNU-176798 inhibits peptidyl transferase (IC_{50}, 40 μM), and the inhibition is more pronounced in the presence of elongation factor P (EF-P). PNU-176798 markedly inhibits the EF-G-mediated translocation of fMet-tRNA (IC_{50}, 8 μM)[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Kinase Assay [1]	Binding of the f[^{35}S]Met-tRNA to E. coli 70S ribosomes is conducted and the initiation reaction mixtures are prepared without initiation factors and contain 6 mM magnesium acetate [$Mg(Ac)_2$], 0.08 μM AUG, 30 mM NH_4Cl, 10 mM Tris (pH 7.4), and 20 pmol of 70S ribosomes in a final volume of 60 μL. The reaction mixtures are incubated for 15 min at 35°C, and the reactions are terminated by addition of cold buffer A, washed with buffer A, and counted by liquid scintillation[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Aoki H, et al. Oxazolidinone antibiotics target the P site on Escherichia coli ribosomes. Antimicrob Agents Chemother. 2002 Apr;46(4):1080-5.

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

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