Product Data Sheet

Product Name: PNU-176798
Cat. No.: GC32378

Chemical Properties

Cas. No.	428861-91-0		
SMILES	CC(NC[C@H]1CN(C2=CC=C(C3=NC=C(C#N)S3)C(F)=C2)C(O1)=O)=O		
Formula	$C_{16}H_{13}FN_4O_3S$	M.Wt	360.36
Solubility	Soluble in DMSO	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure	PNU-176798		

Protocol

Kinase experiment:	Binding of the f[35S]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 NH4Cl, 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].

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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.

Background

PNU-176798 is an antimicrobial agent, targeting protein synthesis in a wide spectrum of gram-positive and anaerobic bacteria.

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 IC50 of 32 μM. PNU-176798 also blocks translation, 70S initiation with IC50s of 0.53, and 32 μM, respectively. PNU-176798 inhibits peptidyl transferase (IC50, 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 (IC50, 8 μM)[1].

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

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