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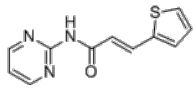
Data Sheet

Global Supplier of Chemical Probes, Inhibitors & Agonists.

Product Name	:	NP-BTA
Cat. No.	:	PC-21852
CAS No.	:	544420-99-7
Molecular Formula	:	$C_{11}H_9N_3OS$
Molecular Weight	:	231.27
Target	:	Fungal
Solubility	:	10 mM in DMSO



CAS: 544420-99-7

Biological Activity

NP-BTA is a potent, allosteric inhibitor of C. albicans **glutaminyl-tRNA synthetase** Gln4 with ITC KD of 180 nM and IC50 of 108 nM, strongly inhibits Candida albicans growth.
Met496 of Gln4 is a critical residue for NP-BTA's species-selective target engagement and potency.
NP-BTA demonstrates efficacy against diverse C. albicans strains.
NP-BTA potently inhibits Gln4 enzyme-catalyzed aminoacylation of synthetic tRNAGln with IC50 of 108 nM.
NP-BTA does not inhibit translation in mammalian cells.
NP-BTA displays therapeutic potential in C. elegans candidiasis and mouse dermatomycosis models.
NP-BTA potently inhibits tRNA amino-acylation by fungal Gln4 through an allosteric mechanism that is unique amongst all other reported tRNA synthetase inhibitors.

References

Puumala E, et al. ***Cell Chem Biol.*** 2024 Feb 20:S2451-9456(24)00046-1.

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