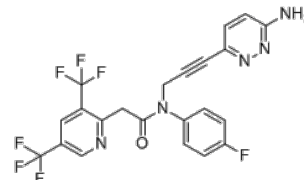


Product Name : RP-6685
Cat. No. : PC-49348
CAS No. : 2832047-80-8
Molecular Formula : C₂₂H₁₄F₇N₅O
Molecular Weight : 497.377
Target : DNA/RNA Synthesis
Solubility : 10 mM in DMSO



1. Bubenik M, et al. *J Med Chem.* 2022 Oct 13;65(19):13198-13215.

Biological Activity

RP-6685 (RP6685) is a potent, selective and orally bioavailable inhibitor of **DNA polymerase theta (Polθ)** with IC₅₀ of 5.8 nM in PicoGreen assay (0.3 nM Polθ enzyme).

RP-6685 displays no inhibition against Pols α, ε, γ, ν (IC₅₀ values >100 μM).

RP-6685 is extremely potent with an IC₅₀ of 550 pM against the pol activity of full-length Polθ and inactive on the ATPase activity.

RP-6685 treated cells isolated from tumors showed a modest trend toward increased micronuclei and γH2AX, which are hallmarks of DNA damage.

RP-6685 treatment caused a dosedependent decrease in MMEJ-mediated DNA repair in treated HEK293 cells, RP-6685 exhibited a potency of 0.5 μM in DSB repair of AAVS1 loci.

RP-6685 (80 mg/kg) showed tumor regression in an HCT116 BRCA2^{-/-} mouse tumor xenograft model.

References

