

DNA polymerase-IN-7

Chemical Properties

CAS No. :

Formula:

Molecular Weight:

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.

Biological Description

Description	DNA polymerase-IN-7 is a non-competitive inhibitor of DNA polymerase beta (DNA Polymerase β) with an IC ₅₀ of 112 nM and a K _i of 35 nM. It effectively inhibits the lyase activity of DNA polymerase beta and interferes with the binding of the lyase domain to DNA. This compound is applicable in cancer research, including studies on cervical cancer.
Targets(IC ₅₀)	DNA/RNA Synthesis
In vitro	DNA polymerase-IN-7 (Compound 28), at concentrations of 0.1-1 μ M, inhibits the dGTP incorporation activity and the lyase activity of DNA polymerase β (Pol β). At concentrations ranging from 0.35-2 μ M, this compound does not significantly affect the binding of Pol β to DNA, but it does hinder the attachment of the polymerase's lyase domain to DNA. It selectively targets X-family polymerases, demonstrating a 50% inhibition of Pol β and a 41% inhibition of Pol λ at 0.1 μ M, with nearly complete inhibition at 1 μ M. DNA polymerase-IN-7 shows no significant cytotoxicity at concentrations of 0-100 μ M over 24 hours, maintaining 95-100% cell viability in HeLa cells. At 25 μ M over 24 hours, its intracellular concentration in HeLa cells reaches up to 4 μ M.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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